

Northwoods Journal – September 2009

A Free Publication About Enjoying and Protecting Marinette County’s Outdoor Life



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Fall Fruit Tasting & Plant Sale Saturday, September 12th At the Harmony Arboretum



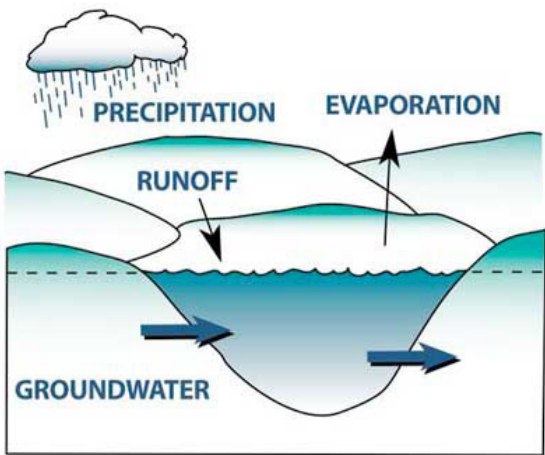
This fun event will take place on Saturday, September 12, from 9:30 a.m. – 1:00 p.m. at the Harmony Arboretum pavilion on County E (1/2 mile south of Hwy 64) in Marinette County. If you are thinking of adding fruit trees to your back yard, this is an excellent opportunity to taste a selection of early apples, plums and pears to make your choice easier. The plant sale is an annual fund-raiser for the local Master Gardeners organization and there will be a large variety of perennials available at reasonable prices. For more information, contact the UWEX office at 715-732-7510, or toll free 877-884-4408).

On the Lakefront – Falling Lake Levels & Climate Change

By Chuck Druckrey, Water Resource Specialist

If you spend much time on Marinette County lakes, you may have noticed that many of them are not quite what they used to be, or at least not as big as they used to be! Throughout Northern Wisconsin, water levels are declining and the shoreline is receding as we endure a third consecutive year of below normal precipitation. The falling water levels have many people worried about the impacts on water quality, fishing, and other recreation and wondering if this is a sign of things to come.

Of course, not all lakes are experiencing low water levels. Drainage lakes and spring lakes typically maintain normal water levels in all but the most severe droughts. These lakes receive most of their water from perennial streams and high-volume springs respectively. Most of the lakes experiencing serious declines are *seepage lakes*. Like spring lakes, they receive most of their water from groundwater inputs but there are no actual “springs” and the lake surface rises and falls with the local groundwater table. Typically those seepage lakes located higher in the landscape or in sandy soil suffer from drought more than those in low-lying areas.



Graphic courtesy of Wisconsin Association of Lakes

So what effects do low lake levels have on water quality? Much depends on the depth and shape of the lake basin. Deep lakes stratify during the summer months. In stratification, the upper 8-12 feet of the lake warms quickly and forms a separate and distinct layer that does not mix with the cooler bottom water. In very deep lakes, this process will remain unchanged. However, in lakes of moderate depth (15-20 feet) stratification is often weak and may not occur at low water levels. This leads to increased phosphorus release from the sediment during the growing season. Very shallow lakes also may see phosphorus levels rise if aquatic plant growth increases drastically and water circulation is greatly reduced. Often the changes are subtle and have as much to do with increased water temperature than they do with water levels.

While changes in water chemistry may be subtle, it’s not uncommon to see dramatic changes in lake ecology as the water recedes. On most lakes, emergent shoreline plants like sedges and bulrush expand their range to take advantage of the newly exposed lakebed.

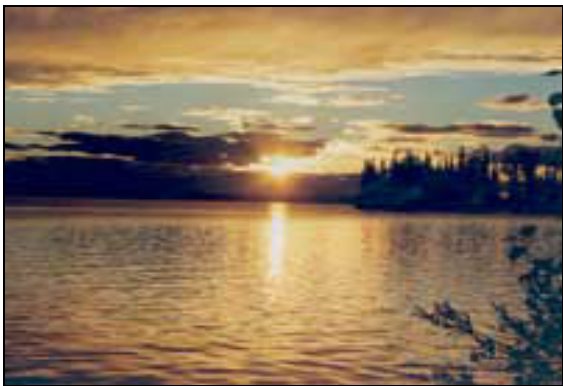


Photo courtesy of Wisconsin Association of Lakes

Water lilies and other floating leaf plants also expand outward into the shallow water they prefer. Submersed plants also rearrange themselves according to depth and sediment preference. In shallow lakes with gently sloping sides, you may see a significant increase in the area that supports aquatic plants (littoral zone) while lakes with steeply sloping sides may see little or no increase in littoral zone habitat. Falling water levels also affect shoreline habitat as shallow gravel bars and large woody structures are exposed, and become unavailable to fish and other aquatic life.



How these changes affect fish and wildlife populations is mixed. DNR fish and wildlife managers report that for each lake and each species, there are winners and losers. On some lakes important wetlands have been effectively removed from the lake, while others have seen the establishment or expansion of wetland habitat where none existed previously. In the same way, rock or gravel spawning substrate lost at one location may be replaced by “new” spawning areas exposed in other areas. The only universal change seems to be the loss of large woody cover since it is typically restricted to shallow near-shore areas. Among the fish species, the nest builders such as bass and bluegill seem to handle falling water levels best, since they can dig to find suitable substrate for spawning. Northern Pike are especially susceptible to wetland loss and walleye reproduction can suffer when windswept gravel bars they use for spawning are left high and dry. Upland wildlife and waterfowl, being much more mobile, seem to adapt to changing water levels by seeking out appropriate habitat as it becomes available.

So are these reduced water levels here to stay? Is global climate change to blame for our low

Continued on page 4

Benefits of a Community Garden

By Andrea Duca, Conservation Intern

"You can't plant a seed and expect FedEx to deliver the fruit tomorrow!"

A community garden is any piece of land gardened by many people; the garden can contain flowers or vegetables, or anything to benefit the community. It can be at a school, hospital, or in a neighborhood. The garden can also be a series of plots dedicated to "urban agriculture" where the produce is grown for a market. Due to the rising cost of oil and subsequent rising cost of food, it is important to know where our food comes from and how to grow it.

Just a few of the benefits from a community garden include:

- ♣ Improve quality of life for residents
- ♣ Beautify neighborhoods
- ♣ Produce nutritious food
- ♣ Reduce family food budgets
- ♣ Conserve resources
- ♣ Create an opportunity for recreation, exercise, therapy, & education
- ♣ Reduce crime
- ♣ Preserve green space
- ♣ Create income opportunities
- ♣ Stimulate economic development
- ♣ Reduce city heat from streets & parking lots



Economic Benefits

We all know the benefits of eating a little healthier with a few more vegetables in our diets, so let's explore some of the economic and social advantages. Economically, it makes more sense to grow your own food than to continue to purchase food at mega-mart retail stores. We've all seen the cost difference between "regular" and organic foods. The price difference is in place for a reason. Organic foods cost a little more to produce, but they have exponential benefits. Just a few of those benefits are increased nutrient content, lower pesticide residues, and little to no food additives (see the reference titled *Health Benefits of Organic Food*). Another cost effective (and fun!) benefit of gardening is preserving the food you've grown. The UW-Extension office and 4H are great resources to aid you in preserving the yummy fruits and vegetables you've grown. Speaking of cost, the initial 'start-up cost' of your personal or a community garden is the largest hurdle. For many, this is the step that will make or break your project. The American Community Garden Association (ACGA) has great suggestions for start-up (check the websites at the end of this article!). They suggest beginning with establishing a need for a community garden, determining what audience the garden will serve (kids, community, local area), and what will be planted (trees, vegetables, flowers, mixed, etc.). Once those details are established, the next steps are contacting interested parties, form committees to

set goals and to accomplish tasks, and choose a well-organized garden coordinator. Then the newly formed community garden association can choose a site, prepare it, and manage it.

Organizing your garden has to be a group decision. What should be planted, how the land is plotted, and the costs associated are important choices. The list below is just a sample of things to discuss when organizing your garden:

- Are there conditions for membership (residence, dues, agreement with rules)?
- How will plots be assigned (by family size, residency, need, group-- i.e., youth, elderly, etc.)?
- How large should plots be - will there be several sizes based on family size or other factors?
- If the group charges dues, how will the money be used? What services, if any, will be provided to gardeners in return?
- Will the group do certain things cooperatively (such as turning in soil in the spring, planting cover crops, or composting)?
- Will there be a children's plot?
- Will the gardeners meet regularly? (If so, how often and for what purposes?)
- Will gardeners share tools, hoses, and other such items?
- How will minimum maintenance (especially weeding) be handled both inside plots and in common areas (such as along fences, in flower beds, and in sitting areas)?
- Will there be a set of written rules which gardeners are expected to uphold? If so, how will they be enforced?

For more ideas on starting a Community Garden, and how to "Make it Happen", visit ACGA's partner site Rebel Tomato at www.communitygarden.org/rebeltomato.

Social Benefits

The vast amount of social benefits is nearly immeasurable. Not only do you get delicious (and nutritious!) foods from the garden, you are effortlessly building a sense of community with your fellow gardeners. Working together for a common goal is an excellent way to get to know those who live near you and enjoy the same things as you (gardening!). Many people in large cities do not know their neighbors and have lost their sense of community. Bringing back a shared place/space restores the friendliness and sense of community once shared in the past. The solitude and satisfaction achieved working in a garden is a wonderful stress reliever, as is the knowledge of where your food came from, and exactly what has been used to grow it. There's a great research article by Gateway Greening in St. Louis called "Successes of Community Gardening: Crime Reduction" describing how knowing your neighbors really helps in reducing the area crime rate. Additionally, community gardens may help increase local property values.

UW-Extension staff is available to help you begin your community garden. Give them a call



at (715) 732-7510, or stop in at the Marinette County Courthouse. In addition, the Harmony Arboretum is a perfect place to take the kids to explore the new Children's Learning Garden being developed, and for you to get gardening tips and ideas! The Harmony Arboretum is located 7 miles west of Marinette and ½ mile south of State HWY 64 on County Rd E. For upcoming events and opportunities at Harmony, see page 8 or call Marinette County UWEX at 715-732-7510. There is also a community garden in Oconto – contact John Pinkart, Oconto County UWEX Nutrition Education Program Coordinator, at 920-834-6846 or email him at john.pinkart@ces.uwex.edu for more information about the Oconto Community Garden.

The following websites were used as references for this article, and might be useful in planning a community garden:

- 📖 *2009 Home Grown Produce Guide to Marinette, Florence and Oconto Counties* http://marinette.uwex.edu/ag/documents/vegieguide_2009_web.pdf
- 📖 Starting your community garden: <http://communitygarden.org/learn/starting-a-community-garden.php>
- 📖 General gardening & horticulture topics: <http://www.communitygarden.org/learn/resources/resourcelinks.php#hortinfo>
- 📖 *Health Benefits of Organic Food* by Shane Heaton, Organic Food News Quarterly. <http://www.grinningplanet.com/2005/12-27/health-benefits-of-organic-food-article.htm>
- 📖 *The Effect of Community Gardens on Neighboring Property Value* by Vicki Been and Ioan Voicu: http://lsr.nellco.org/cgi/viewcontent.cgi?article=1049&context=nyu_lewp
- 📖 *Community Gardeners and Struggles for Inclusion: Enacting rights of citizenship through community gardening in Buffalo, NY* by LaDona Knigge, PhD Candidate University at Buffalo (SUNY) <http://communitygarden.org/docs/learn/cgcitizenship-05acga.pdf>
- 📖 *Successes of Community Gardening: Crime Reduction*: by Gateway Greening in St. Louis: www.gatewaygreening.org/WhitmireStudy.asp
- 📖 City Farmer News: New Stories from 'Urban Agriculture Notes' www.cityfarmer.info/

Northwoods Journal Online

Would you like to read current issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and click on the link at the bottom of the page. We can even send you an e-mail reminder when each new issue is posted on our website. Please contact Anne Warren at awarren@marinettecounty.com or call 715-732-7784 for more information.



Building the Perfect Campfire with Smokey Bear

By Catherine Regan, DNR Wildfire Prevention Specialist



Maybe you are new to camping or never had much success in building a campfire - either way, there are a few tips to keep in mind for your next outing. For some expert advice, I had the opportunity to interview my friend Smokey Bear himself to walk us through the steps of building the perfect campfire and making sure it's safe from starting a wildfire. Here's what I learned:

Catherine:

How do you prepare for a campfire, Smokey?

Smokey:

It's important to pick a good location. Look for a fire ring. If there isn't a fire ring, look for an area that is designated for campfires. The firewood you use should be dry and clean, free from any chemicals. And, make sure you use only local firewood so you don't transport problem insects into new locations.

Catherine:

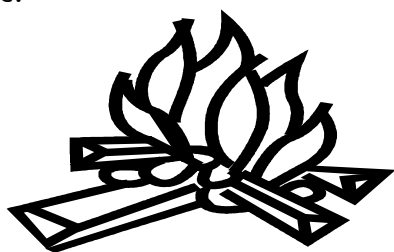
Are there any fire safety tips when picking a location?

Smokey:

You bet! Pick a location that is free from burnable materials, such as leaves and pine needles. Place your tent and firewood at a safe distance from the fire. And, before you burn, always check to make sure there isn't a ban on campfires due to dry conditions.

Catherine:

What are some ways to make a good campfire?



Smokey:

I like to make a campfire in a square frame format. Just a couple of pieces of wood on each side, and add a couple more on top of those. Then, roll up some newspaper and place it in the center. Add a few smaller sticks on top of the paper in a crisscross pattern. Never use flammable liquids because they can be very dangerous. An adult should always be present and never allow children to handle the matches or lighters.

Catherine:

After the fire has started, what are some things to look for to make certain the fire is safe?

Smokey:

The number one rule is to keep the fire small in size. Always have a bucket of water and tools nearby, like a rake or shovel. When adding logs to the fire, be sure to watch for flying embers. Campfires on windy days are never a good idea and never leave your fire unattended!

Catherine:

What are some of *your* favorite things to do around a campfire, Smokey?

Smokey:

Campfires are *great* for cooking hot dogs or roasting marshmallows. I also enjoy the warmth of a fire at night and use the light to tell ghost stories or sing songs. One thing I never do is use my fire as a garbage disposal. I prefer to always take my garbage home and recycle because there are a lot of toxic fumes that come from burning plastics and other waste.

Catherine:

What should you do with your fire when finished?

Smokey:

Make sure that fire is out before you leave! Drown the fire with plenty of water, stir the ashes with your shovel, add more water, and stir again. Place the back of your hand over the ashes to check for any heat. If so, repeat the steps until the ashes are cold.

Catherine:

Do you have any famous last words for any future campers?

Smokey:

Fire prevention is everyone's responsibility. Remember, only you can prevent wildfires!



Area Farmers' Markets

Marinette Farmers' Market. Tuesday, Friday, and Saturday mornings at Main Street Market, Merchants Park, corner of Main & Wells Streets.

Menominee Downtown Farmer's Market. Marina bandshell, thru Sept. 31. Saturday market from 9-11am and Thursday market starts from 3-7pm.

Crivitz Flea & Farmers' Market. Thursday mornings in the Crivitz Town Hall parking lot.

Crivitz Farmer's Market - Green Thumb Garden Shoppe. July 11-Oct.10, Saturdays only. Corner of County Hwy A and Mira Ave in Crivitz.

Amberg Flea & Farmers' Market. Occasional Saturdays, at Amberg Antiques & Sweets, Highway 141. More information & schedule, 715-759-5343.

Amberg Farmer's Market. Saturdays from May through October. Downtown Amberg.



HAUNTED HARMONY TAKING A BREAK IN 2009

The very popular Halloween event called *Haunted Harmony* that takes place at Harmony Arboretum in the Town of Grover on County E, has to take a hiatus for this year. Due to circumstances beyond our control the ghouls and ghosts have decided to take a break this year. **But never fear, Hatchet Hank, the walking dead, and the terrors of the haunted hardwoods will be back and will be even scarier than ever in October of 2010.**



Please don't think that any of us have quit having the event. *Haunted Harmony* will return next year in October, on Friday, the 22nd, and Saturday the 23rd, 2010 from 6:30 p.m. to 10:00 p.m. It will be bigger and better than ever! Plus it will still only be 2 non-perishable food items or something for the animal shelter for admission. Look for press releases regarding *Haunted Harmony 2010* next year starting in August. We will be looking for volunteers and scare stations!

If you have any questions, please contact Leta DiRienzo at 715-732-7780, or email adierenzo@marinettecounty.com.

Northwoods Journal

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The *Northwoods Journal* focuses on various outdoor recreation opportunities and local environmental topics to inform readers about natural resource use, management, and recreation in Marinette County.

Published in cooperation by:

- Marinette County Land & Water Conservation Division
- Marinette County Parks & Outdoor Recreation Department
- University of Wisconsin-Extension

UW-Extension provides equal opportunities in employment and programming, including Title IX and ADA. To ensure equal access, please make requests for reasonable accommodations as soon as possible prior to the scheduled program. If you need this material in another format, please contact the UW-Extension office at 715-732-7510.

Please send comments to:
Marinette County Land & Water Conservation
1926 Hall Ave, Marinette, WI 54143
(715) 732-7780
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Lake Levels, continued from page 1



water levels? Most experts believe the answer is yes. While it's true that fluctuating water levels are nothing new, climatologists and lake managers point to a distinct downward trend in summer precipitation over the last 50 years and longer ice-free periods in Wisconsin and throughout the northern hemisphere.

The Wisconsin Initiative on Climate Change Impacts (WICCI) has formed working groups to study climate change and its impact on the State. Work Group members report that while there is some variability in the outcome of different climate models when it comes to changes in annual precipitation, all predict winters in Northern Wisconsin that are much warmer with increased precipitation and summers that are longer, slightly warmer, and drier. This will lead to much longer ice-free periods, increased evaporation, and low water levels.

So what effect will global climate change have on our lakes? If the long-term predictions hold true, by the end of the century our summers will resemble current day Alabama and winters will resemble those in current day Iowa! This will lead to an expansion of warm-water fish species such as bass and bluegill at the expense of cool water species such as musky and walleye, and drastic declines in trout and other cold-water species. Our warming lakes will also be able to support more invasive fish and aquatic plants, species that are currently held at bay by our severe winters. In deep lakes the length of summer stratification will increase, adding to the risk of oxygen depletion in the bottom waters, but shallow lakes will be less likely to experience winterkill due to the shorter period of ice cover.

Many of these changes have already begun. To prevent further damage to our lakes and streams we need to reduce greenhouse gas emissions and minimize other disturbances so our lakes are better able to withstand the coming changes, and plan for the impacts of global climate change.

For more information on falling lake levels & climate change, visit the websites below:

- The **Wisconsin State Climatology Office** website has state climate records and a wealth of information on climate change and its impacts on local ecosystems: <http://www.aos.wisc.edu/~sco/>.
- The **Wisconsin Initiative on Climate Change Impacts** has been working to interpret climate change predictions and determine how they will affect the state of Wisconsin: <http://www.wicci.wisc.edu/>.
- Presentations and materials from the May 2009 workshop "**Declining Lake Levels: Living Lightly on Less Water**" can be found on the Wisconsin Association of Lakes website: www.wisconsinlakes.org/events/09may_lowlake.html.



Wisconsin Tree Farmer of the Year Award: Robert & Phyllis Gottschalk

By Katie Boseo, UW-Stevens Point undergraduate student

Robert and Phyllis Gottschalk of Crivitz, WI, did not expect to receive recognition for the hard work and tireless dedication they had put into conserving and managing their forest land for the past 21 years, but they were more than honored when they found out they had not only been nominated, but were named the 2009 Tree Farmers of the Year for the Northeast Region and were runners-up for the Wisconsin Tree Farmer of the Year award. The award is given by the Wisconsin Tree Farm Committee and sponsored by the American Forest Foundation, based in Washington, D.C. Tree Farmers are judged on forest management activities, such as sustainable timber harvests, tree planting initiatives, environmental protection efforts, wildlife habitat enhancements, and efforts to promote sustainable forestry.

One of the greatest improvements Robert and Phyllis made on their tree farm was the regeneration of 110 acres of their property to scrub oak and aspen. While much of the scrub oak in areas surrounding their property is being neglected and dying off without regeneration to replace it, Robert and Phyllis have successfully regenerated their property to support a new, thriving scrub oak forest. This was accomplished through a properly planned timber harvest prescribed by the Wisconsin DNR. Not only did this regeneration increase the health of their forest, but it also increased the amount of wildlife in the area. They took this initiative to the next level by talking with their neighbors and friends, encouraging sustainable forestry and stressing the importance of scrub oak regeneration. "When we first came to the land, we were just looking for a place to go," said Robert, "Interest in forest management came about a year later. We want a healthy forest. That's the thing we're trying to save."



Robert and Phyllis gained tree farm membership in 1996, after approval by a Consolidated Paper forester. They have been members of the Wisconsin Woodland Owners Association since 1991 and in 1999, they became charter members of the newly formed Phoenix Falls Chapter. The Gottschalks have hosted part of a Consolidated Paper Co. field day, as well as two Phoenix Falls Chapter field days. These field days consisted of demonstrations and learning stations. In 2005, Phoenix Falls Chapter hosted the annual WWOA four-day state meeting at the Gottschalk's property.

But there's more than just trees on this couple's mind. Between 1996 and 1999, Robert and Phyllis converted about 11 acres of unused farm field into native prairie fields. The prairie has been through three prescribed burns in its lifetime and another is planned for next spring, with many volunteers needed to make the burn a success. A total of six types of native grasses were seeded on the parcel, along with a number of native wildflowers. Robert and Phyllis have also erected 18 blue bird houses and have fledged out over 200 blue birds in the last 14 years. In 2007, the Gottschalk's welcomed Paul Kaneh, a DNR fisheries technician, to study the effects of timber harvesting on trout stream fauna and water quality. Their land was chosen for the study due to a planned timber harvest on their managed forest law property near the Medicine Brook, a high quality trout stream. The main goal of the study will determine the effects on trout reproduction, since the stream has a naturally reproducing population of brook trout. The study involves stream shocking trout and other trout stream fauna, along with water quality measurements prior to and following the timber harvest.

Robert and Phyllis have also been involved in their communities, promoting the conservation of natural resources. They have served on the Town of Stephenson Comprehensive Planning Committee, the Upper Green Bay Watershed Citizens Advisory group, the Middle-Thunder Rivers Priority Watershed Advisory Committee, and have participated in the Citizens Natural Resources Academy. Robert and Phyllis' love for nature goes far beyond sustainable forestry. They placed 200 acres of their property in a land trust that will keep the area undeveloped or divided for future generations to enjoy. "Once you have something dear to your heart, you want to see it remain in its perpetuity," said Phyllis.

The Gottschalks will be presented with their award during the Tree Farmer Awards banquet in Stevens Point on September 12th, 2009. For information on the Wisconsin Woodland Owners Association contact Ted Zabel at 920-822-8214. For information on sustainable forestry in Marinette County contact Steve Kaufman, DNR Forester, at 715-856-9157.



CRITTERS WE LOVE TO HATE: DEER & HORSE FLIES

By Aleta DiRienzo, Database Specialist & Program Assistant



So far in our series we've written about leeches, ticks and mosquitoes - now we will learn about deer and horse Flies. Anyone who has gone for a walk down a country road in the summer or has gone to the old swimming hole is familiar with the deer and horse Fly. Females of the species are the ones we know the best - they are vicious, painful biters. Anyone who has experienced a horse fly bite won't soon forget it. These flies cut through the skin with knife-like mouthparts and suck the blood for several minutes. When they fly away, a drop or two of blood usually seeps from the wound, becoming secondary feeding sites for other insects. They feed on the blood of cattle, horses, mules, hogs, dogs, deer and other warm-blooded animals, even humans. Like mosquitoes, females need a blood meal to reproduce.

There are more than 30 species of blood-feeding deer and horse flies found in Wisconsin. In the world there are about 4,300 species of horse and deer flies, with approximately 335 of them living in the continental U.S. Of the 335, 160 species are horse flies, and over 110 species are deer flies. They belong to the family of flies called the *Tabanids*. The deer fly belongs to the subspecies *Chrysops* and the horse fly the subspecies *Tabanus*. These flies may be active from May through September. The female adults are daytime blood feeders that are most abundant near swamps and marshes, along ponds and stream banks, and at the edge of wooded areas. Adults are very strong fliers that are attracted to dark moving objects and to carbon dioxide, and are capable of flying long distances from their breeding sites and will rest in tall grass waiting for their preferred hosts. Once attracted to a host, they circle around the victim and pursue until they feed or are killed.

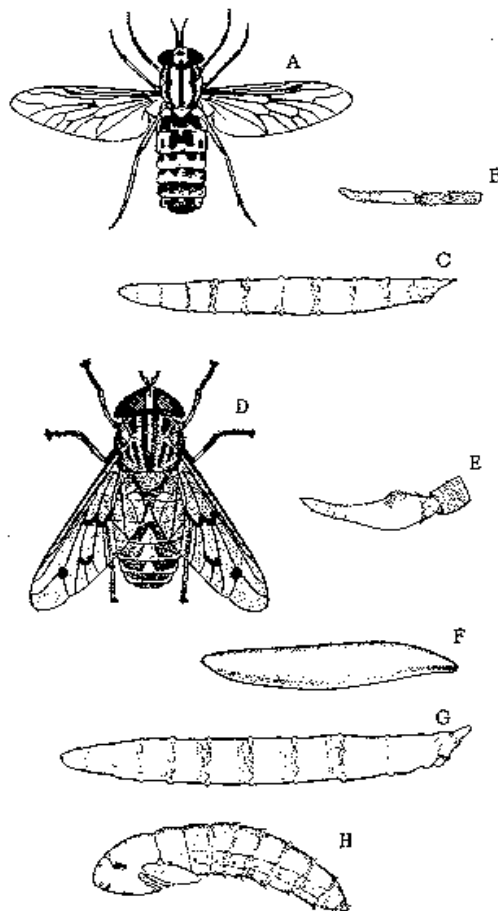
Deer flies are smaller than horse flies and have dark markings on the wings. Their bodies are often yellow and black striped and they have long, thin antennae. They have brilliant green or golden eyes with zigzag stripes (see photo below). The horse fly is larger, measuring from $\frac{3}{4}$ - $1\frac{3}{4}$ inch in size depending upon the species. The smaller species are black or gray in color and often have green eyes. The antennae



are thick and lengthen into 5 thinner segments. Their wings are usually clear or completely dark (see photo at left).

Adult horse and deer flies are relatively large to very large (approximately 0.25 to 1.25 inches long), robust flies with a pair of huge eyes known as "compound eyes." Those of some horse flies have colorful purple or green bands against a blue or yellowish-green background. The mouthparts are large and prominent, projecting downward and forward in front of the head. They have large, fan-shaped wings and are capable of rapid flight and flying long distances.

The life cycle for deer and horse flies are similar to all other flies in that they develop from egg to adult via a process of "complete metamorphosis". It all begins with the emergence of adults from late spring into summer, depending on the species. Upon first becoming active, the adults of both sexes feed on nectar, plant sap, or honey-dew produced by sap-sucking insects such as aphids and scale insects. Females from some species are able to produce a batch of eggs without having a meal of blood. But for most, a meal of blood is required for egg development. Eggs are laid on the underside of leaves or along stems of vegetation growing along wetlands. The female lays between 100 up to 800 eggs, depending on the species. The eggs are dark, shiny, spindle shaped and in layered masses (tiers) of a few to several hundred. Hatching occurs in approximately 2 - 3 days. Newly emerged larvae drop down into water or saturated soil where they feed and develop. Fully-grown larvae are cylindrical, tapering toward both of the ends, whitish or yellowish gray, banded with black or brown and a fleshy elevated ring on each body segment. They are tough skinned and reach up to two inches long - they also make good fish bait!



Horse flies and deer flies. A-C, Deer fly. A, Adult. B, Antenna. C, Larva. D-H, Horse fly. D, Adult. E, Antenna. F, Egg (enlarged). G, Larva. H, Pupa.

Just where horse and deer fly larvae develop is known for only about a third of the species in the U.S. Deer fly larvae appear to favor aquatic habitats; sites for horse fly larvae development are more varied. They are found in freshwater

Where in Marinette County?

Tell us where this photo was taken and you could win a prize!

To enter, send a note including your name, address, and phone number or email awarren@marinettecounty.com. Any interesting facts about the subject are also welcome. Correct answers will be entered in a drawing for a \$20 gift card from Wal-Mart. **Please respond by September 14, 2009 to be entered in the drawing.**



Unfortunately, nobody guessed the picture from August's "Where in Marinette County" contest! The picture below was taken in the Town of Wagner on County Road JJ.



Thanks to everyone participating in 2009, and good luck with this month's photo! The winner of this issue's "Where in Marinette County?" contest will be posted in the June 2010 issue. Thank you for reading the Northwoods Journal, and we wish you a pleasant rest of the year - see you in 2010!

marshes, streams, moist forest soils and in moist, decomposing wood. The larvae of all the horse flies studied are predators, and feed primarily on other soft-bodied animals such as insect larvae and worms. Some of the larger species of horse fly larvae feed on small vertebrates, including amphibians, and may also be cannibalistic and eat other horse fly larvae. Horse fly larvae appear to possess a toxin in their saliva that is involved in subduing their prey. There isn't much known about the eating habits of the deer fly larvae, with no studies on whether they are predators or scavengers.

The pupal period varies between species and may range from six to twelve days, depending on temperature. Adult flies emerge from pupa and immediately begin mating and blood feeding, and most species complete one generation per year. However, small species of deer flies can complete 2 or 3 generations per year and very large species of horse flies require 2 to 3 years in which to complete larval development.

Both deer and horse flies are potential carriers of diseases such as anthrax, tularemia, anaplasmosis, hog cholera, equine infectious anemia, and filariasis and are also suspected of transmitting Lyme disease (New England Journal of Medicine, 322:1752, 1990). Some people, upon being bitten, suffer from severe lesions, high fever and

Continued next page



Flies, continued from page 5

and general malaise. These symptoms are an allergic reaction to the saliva from the flies, especially if they have been bitten repeatedly.

Activity is greatest on warm, sunny days when there is little or no wind. A slight drop in temperature or a sudden breeze reduces biting attacks. Deer Flies are attracted to moving objects and dark shapes, and attack humans especially around the face and neck areas. When involved in outdoor activity, protect yourself with repellents such as Deet or Off, or permethrin. Deet-based repellents are effective only for a few hours, and need to be reapplied. Permethrin-based products last longer but should only be applied to clothing, never the bare skin.



Horse flies are attracted to shiny surfaces, motion, carbon dioxide, and warmth; people can also be attacked while in swimming pools. Flies will land on the skin and bite, causing much pain. Others will fly erratically near the head, banging into objects recklessly, while some will just rest on porches, especially in late August.

As we have discussed, deer and horse flies can be found almost anywhere, so you need to protect yourself from their attacks when you go fishing, swimming, hiking or hunting. If you don't want to use pesticides, here are some homemade ideas you can use to protect yourself:

- 🦋 **Cover Up** – Just like with any blood-sucking pests, deer and horse flies will attack bare human skin. Wear long pants, long-sleeved shirts and socks.
- 🦋 **Wear a Hat** – Use a wide-brim hat with a bug net attached; because these flies love to buzz around the head, a hat is a good remedy against them feeding on your flesh.
- 🦋 **Avoid the Color Blue** – These flies seem to like the color blue, so avoid that color when picking out your protective clothing.
- 🦋 **Sticky Fly Strips** – Apply a couple pieces of sticky fly tape strips side by side onto the back of a hat. It seems like these flies like to land on their victims a couple of times before biting, so when you wear your hat with the sticky strips, they land and get stuck on the tape!



- 🦋 **Aim High** – Stick a feather, flower, or small branch in your hat and it will protect you from bites!

Marinette County Rural Landowner Workshop Agenda

Saturday, September 19th from 9:00 a.m. to 3:00 p.m., at the Crivitz High School in Crivitz
Workshop Fees: \$5 per person, or \$12 per family.

Please mark your first and second choices for each session, using a 1 and a 2 for each person registering on this sheet. Fill out the contact information and send to the LWCD at the address below.

9:15 to 9:50 a.m. Registration and display viewing
10:00 to 10:55 a.m. Workshop Session A

- _____ 1. Land Trusts – Tony Warren, Ozaukee-Washington Land Trust, Inc. Interested in protecting and preserving natural areas, open spaces, and water quality of your local communities? Learn about opportunities to preserve your land through a variety of voluntary conservation options that best meet your needs.
- _____ 2. Forest Birds of Marinette County – Greg Cleereman, County Conservationist. Learn how to identify your bird neighbors, both by sight and song, as well as about behavior, ecology & migration.
- _____ 3. Starting a Livestock Operation – Abby Huibregtse, Oconto County UW-Extension Agriculture Agent. What should you be thinking about doing to get a livestock operation started? There are a few legal and a number of logical issues that you should consider if you want to raise poultry, horses, cattle, or other animals.
- _____ 4. How to Hire a Consulting Forester – Steve Kaufman, WI DNR Forester – Wausaukee. Managing woodlands is made easier if you have a good working relationship with a qualified forester. This session will help you understand what traits to look for in a consulting forester.

11:00 to 11:55 a.m. Workshop Session B

- _____ 1. Managed Forest Law – Steve Kaufman, WI DNR. The MFL program can be a very valuable economic tool in your woodlands management program. Learn the realities of this program during this session.
- _____ 2. Preventing Invasive Species – Robert Ruleau, Aquatic Invasive Species Coordinator. Non-native invasive species are a serious threat to the economy and ecology of Marinette County. Learn how to identify some of the more troublesome species, prevent their introduction and spread, and control established populations.
- _____ 3. Direct Marketing – Scott Reuss, Marinette County UW-Extension Agriculture/Horticulture Agent. Selling food items directly to consumers is a great way to capture more of your products' value. This session will share methods to consider (including producers sharing their marketing tools) and legal issues you need to know.
- _____ 4. Landscaping with Native Plants – Linda Warren & Adrian Konell. Using native plants in your landscape can lead to fewer pest problems, better ecological diversity, and other benefits.

Noon to 1 p.m. Lunch on your own

1:00 to 1:55 p.m. Workshop Session C

- _____ 1. Forest Insect & Disease Issues of 2009 – Linda Williams, DNR Regional Forest Health Specialist. Linda will review the pests affecting our forests and how you may be able to manage those pests.
- _____ 2. Vegetable Gardening 101 – Scott Reuss, UWEX. In this session, we will go through the basics of vegetable garden siting, site preparation, vegetable selection, and basic management tips and techniques.
- _____ 3. Natural Shorescapes – Charles Druckrey, Water Resources Specialist. Learn about the importance of natural shorelines in the lake ecosystem and how to design a lake-friendly shore. The workshop will include methods for restoring natural shorelines including landscape design, choosing native plants for your shoreline conditions, and planting & maintenance of a natural shoreline. Learn which plants do well in Marinette County and what not to plant along your shoreline.
- _____ 4. Computer Tools for Land Managers – Tim Oestreich, GIS Coordinator. This session will preview many of the GIS data layers available to the public by utilizing Marinette County's new online Land Records System. Learn how to find ownership & tax information, aerial photos and how to print maps.

2:00 to 2:55 p.m. Workshop Session D

- _____ 1. Oak Wilt & Emerald Ash Borer – Linda Williams, WI DNR. In this session, Linda will concentrate on these two deadly pests.
- _____ 2. Home Food Preservation – Nancy Crevier, Marinette County UW-Extension Family Living Educator. Canning, freezing, and drying your garden's bounty safely is an important way to get the most production from your garden, or to safely store fresh produce you buy from local farms.
- _____ 3. Native Pollinators – Linda Warren & Adrian Konell. Take a pictorial tour of the native pollinating insects in our area. Learn how you can increase their numbers and help your plants' production potential.
- _____ 4. Buying Feed and Contracting Agricultural Services. Scott Reuss & Abby Huibregtse – UWEX. This discussion will increase your understanding of feed quality, feed purchase agreements, and legal issues surrounding hiring custom work (or hiring your services out to others).

Youth programs. If you have children (ages 5-14) attending the conference with you, there will be a variety of hands-on topics about wildlife, nature, and science available for them. Please mark how many children will attend with you in each time frame so we may plan accordingly.

_____ 10 a.m. to Noon _____ 1 p.m. to 3 p.m.

Names & # of people attending: _____

Address: _____

Phone Number & email: _____

Please enclose a check made payable to Marinette County, and mail this form and your check to: Land & Water Conservation, 1926 Hall Avenue, Marinette, WI 54143



Aquatic Invasive Species – Issues Affecting Lake Health

Courtesy of the Wisconsin Association of Lakes website, www.wisconsinlakes.org

Contributed by Robert Ruleau IV, Aquatic Invasive Species Coordinator

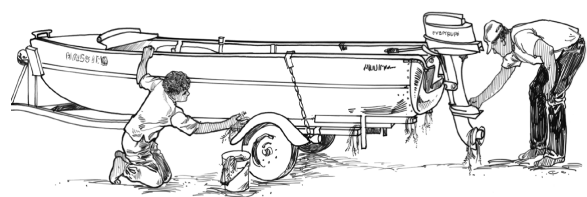
Aquatic Invasive Species (AIS)—which include plants, animals, and viruses—are a serious challenge for our lakes. Lake associations, lake districts, and individual waterfront property owners are rightfully concerned about the potential impact that invasive species can have on lake ecosystems and recreation. Many groups are investing private (and state) dollars into treating waters for invasives like Eurasian water milfoil, curly leaf pondweed, and Asian carp. Many lake groups are participating in public education campaigns (like Clean Boats, Clean Waters) to encourage boaters to take simple steps to prevent the spread of AIS. Others are organizing volunteers to conduct AIS monitoring.



Non-native species are not a new phenomenon. Some non-native species—like Eurasian water milfoil and carp—become invasive in new environments. But the introduction of AIS into a lake does not necessarily mean the destruction of the lake. Wisconsin has many invasive species at different stages of colonization, and more invasive species are on the horizon. Our scientific understanding of strategies for prevention, containment, and management is still evolving. A strategic combination over time of volunteer effort, continuing scientific research, legislation, funding, administrative rules, county ordinances, prevention programs, and educational efforts are all necessary to make progress on AIS.

More people, places, & vectors for invaders

As human populations have become more mobile, and movement has become more global, so have the species we move around with us. Unwanted hitchhikers can be speedily transported on planes, boats, and cars across town or across the ocean. Transfer of water between water-bodies can introduce pieces of invasive plants, organisms, and pathogens into unaffected waters.



When ocean going ships—called “salties”—flush their ballast water tanks, they can deposit exotic stowaways directly into the Great Lakes. Some of these hitchhikers—zebra mussels, sea lampreys, viral hemorrhagic septicemia, and the New Zealand mud snail—have thrived in their new habitats, becoming invasive species that are causing big ecological and economic damage. Most recent invasive species have entered the Great Lakes via saltie ballast water. The Great Lakes are currently home to 185 invasive species, with a new invasive being discovered every six months. Some of these Great Lakes invaders have moved to inland lakes.

Transfer of soil from one place to another can transport seeds, plant parts, or microbes that can begin to grow elsewhere. Transportation of food goods, firewood, seed mixes, and escaped cultivars are also common sources of transportation for invasive species.

Not all non-native species become invasive

Humans play a big role in introducing new species

(some of which will become invasive) into new habitats. But unlike more traditional notions of pollution, species can transport and reproduce themselves. Animals and plants move around and find places to live, independently of humans. It's not like regulating industrial or municipal sources, where there's a regulatory shut off valve on a waste pipe that can stop a given pollutant from entering the water. With invasives, ultimately—unless we discover and shut off that valve at exactly the right time—we have limited control over species that are doing a fine job on their own.

But, of the large number of species that are introduced into new habitats, few are successful as invaders. Traits that can make an invasive “invasive” include:

- Ability to reproduce quickly and/or in great quantity
- Efficiency in getting themselves (or spores, eggs, seeds) distributed
- Growth patterns that enable invaders to out-compete or circumvent native species' life cycles
- Ability to persist in environments because of broad physiological tolerance or quick adaptation

Not all lakes are equally susceptible to invasion by a given species. And the same invasive may not have the same effect on all lakes. Each lake possesses its own unique characteristics—water chemistry, undisturbed shorelines, low nutrient loading—that may lower the risk of potential invasions. Ongoing research is exploring what lake characteristics may make some lakes more habitable to certain species of invasives. This type of research may lead to smart prevention strategies that allow lake managers to assess which invasives may or may not be problematic for a given lake. The best approaches to prevent, contain, manage, or prevent certain species may be yet to be discovered.

Disturbance and possible invasions

Many non-native species that become invasive benefit from disturbed habitats. Disturbance simply means an alteration of a habitat's normal state. Some disturbances are natural—flooding, drought, fires, and other changes which may be part of a natural cycle or an extreme event. Some disturbances may be man made — clearing of shoreline plants, more nutrients entering the lake, scouring or changing of the lake bottom, and increased turbidity (murky water conditions). *Whenever a disturbance occurs, open habitat is created and something will come in to fill the void.* More extreme disturbances like flooding or an increase in nutrients over time may change what species can live in the lake and tolerate the new conditions. Disturbance can create conditions that give an advantage to invasives and suppress natives.



Invasive populations tend to arise from habitats that are prone to ecological disturbance. Often these invasives thrive in habitats that are in a constant state of disturbance or are able to adapt and tolerate a broad range of environmental condi-



tions (like high pollutants) that natives cannot withstand. While the same native shore-line plants may recover and reclaim their old space, many invasive species possess “weedy” traits that enable them to quickly take advantage of new territory and out-compete natives. The modern day practice of mowing our lawns is an example of keeping an ecosystem in a constant state of disturbance—to the benefit of invasive species no less (grass, dandelions, and clover are all native to Europe)!

Troublesome invasives like Eurasian water milfoil and curly leaf pondweed benefit from nutrient rich waters, and many of our lakes have become watershed collection ponds for fertilizers and sediments. The results of disturbance are unpredictable. The resulting lake community can be dominated by:

- species not present prior to the disturbance (an invasion, note this does not necessarily mean a non-native species)
- species that were dominant before the disturbance
- or it might become dominated by species that were present before the disturbance but not dominant

Keeping your shoreline intact is a good way to minimize disturbance and minimize opportunities for invasive species to gain a foothold.

Prevention

Prevention is the most cost effective and “easiest” way to deal with AIS. Constant vigilance by citizen volunteers, training on identification of invasive species, and education campaigns can be effective over time. The dedication of citizen volunteers and boater education programs like Clean Boats, Clean Waters has led to many citizens taking simple preventative steps when boating and fishing. AIS monitoring and aquatic plant management surveys, often commissioned by lake groups and funded by DNR lake grants, have greatly increased local knowledge about the presence/absence of AIS in lakes. This is critical information to have in the event that an invasive species is discovered in the lake, as it can help quickly assess the extent of the problem and guide lake managers on treatment options.

Containment

Some invasive species are in the pioneering stage - there are a few individuals that have been dropped into a new habitat and are surviving. There may not be enough individuals to have a reproducing population that can be sustained over time, so this can mean that the invasive individuals simply die out (the population is self limiting). It also means small numbers of an invasive over a large area can be hard to discover. The more established an invasive species gets, the harder it becomes to eradicate it from the landscape.

Management

Management can mean you are working to prevent further spread to additional water bodies, preserving native habitat, containing an invasive population to a restricted area, or perhaps managing for certain uses (recreational) of the lake. Many groups are investing private (& state) dollars into treating waters for invasives like Eurasian water milfoil, curly leaf pondweed, and carp.

Continued on page 8



Area Events Calendar

September 5	Annual Kite Fly-in 11:30am-2pm at Red Arrow Park, Marinette. Free kites, food & games. For more information call 735-7785.
September 5	Copperhead Classic Rock Band at the Curve Inn Resort, N9464 Parkway Road, Crivitz. Come and Rock & Roll with the Copperhead Band!
September 5	Moose on the Menominee Car Show at the Marinette Moose Lodge grounds. Registration 7-11am, judging closes at 12pm, trophies and awards at 2pm. \$5 registration, free public admission, refreshments available all day, D.J. music. Contact information/ call Ed @ 906-753-2340 or Darrel @ 715-735-6477.
September 8	Fall Session for Tri-County Dog Training Academy. Dog obedience classes, puppy class, beginners I and beginners II. Tuesday nights at the National Guard Armory, 2000 Mary Street, Marinette at 7pm. Program about one hour-no dogs first day. Classes are limited. Registration forms are available on web www.tcdta.org or call 715-735-8232
September 12	Annual Peshtigo River Paddle. 10a.m.-3p.m. Free guided paddle trip on the Lower Peshtigo River from the City of Peshtigo landing to the County Rd. BB landing. Youth under 18 must be accompanied by an adult, and you must provide your own snacks, water, etc. This is a free public event. For more information call 715-732-7780.
September 12	Fall Fest & Plant Sale at Harmony Arboretum. 9:30a.m.-1p.m. See box at right.
September 12	Fall Fun Triathlon. Race starts 8am at the YMCA. Registration forms are available at Menominee facility. Run individually or in teams. Call 863-9983 or visit www.mmymca.org for more information.
September 17	Cubs vs. Brewers Trip. Cubs vs. Brewers at Wrigley Field. \$95 per person includes coach bus fare and Terrace Reserved Outfield seats. Pre-register at the Civic Center, 2000 Alice Lane. Call 732-5222 for more information.
September 19	Tri-County Dog Training Academy Ninth Annual Fun Match. 8am, Marinette Armory Building, 200 Mary Street, Marinette. Obedience, confirmation, & rally. Free admission, public invited. Food & refreshments, huge bucket raffle. Call 735-8232 or visit www.tcdta.org for more information.
September 19	Shindig in the Pines. Pine Acres Resort, N10184 Parkway Rd. Crivitz, WI 54114. 1-10 pm. One day Bluegrass Fest. Afternoon workshops and evening entertainment. Call 715-757-3894, or email pineacrst@excite.com .
September 26	Peshtigo Historical Day. Main events at Badger Park, 8a.m. Walk/run at 8am, registration 6:45-7:45 a.m. Parade at 10 a.m. Live music 11:30 am to 10 pm. Craft booths, food, games all day. For more information call Peshtigo Chamber of Commerce, 715-582-0327 or peshtigochamber.com .
November 5:	Astronomy at the Arboretum. 6:30-7:30 p.m. See box at right.

2009 Environmental Awareness Poster Contest



Every fall the Marinette County Land & Water Conservation sponsors with the Wisconsin Land & Water Conservation Association the Environmental Poster Contest for school aged children in Wisconsin. Subject matter shall be of an environmental awareness or conservation of natural resources such as soil conservation, water quality, air, wildlife, and forestry as related to Marinette County or Wisconsin. **Poster participants are encouraged to use the Soil Stewardship theme of “Dig It – The Secrets of Soil”.** This theme helps us to learn about soil. Almost all of the minerals and nutrients we need for life, to nurture us, to help us grow, to give us energy and keep us healthy come from fields, gardens, trees and pastures. Every plant, vegetable, or fruit that we eat gets its nutrients from the soil in which it grows. Your home is built on soil and what type of soil is important.

First place winners of the county contest will be entered in the Lake Michigan Area Land & Water Conservation (LMLWCA) Area Contest in October 2009. The first place winners in the area contest will be entered in the Wisconsin Land & Water Conservation Association (WLWCA) Contest in November 2009. The first place winners of the state contest, who qualify, will be entered in the National Association of Conservation Districts contest. If you want to be entered into the national contest, you must use the Soil Stewardship theme. Prizes will be awarded to the first three places in each division in the contest at the county, area and state level.

Contest Divisions are:

- Primary Students in Grades K-1 during the school year
- Elementary Students in Grades 2-3 during the school year
- Middle Students in Grades 4-6 during the school year
- Junior Students in Grades 7-9 during the school year
- Senior Students in Grades 10-12 during the school year.
- Special Needs Junior (K-6) Students enrolled in ED, LD, CD during the school year.
- Special Needs Senior (7-12) Students enrolled in ED, LD, CD during the school year.

Students enrolled in ED, LD, CD may enter in either their grade level or one of the Special Needs Divisions.

Posters must be returned to the Land Information Department – 1926 Hall Avenue – Marinette WI 54143-1717 by Friday, October 9, 2009 and must have an entry blank attached to the back of the poster to be eligible for area and state contests. For an entry blank and a copy of the rules, please call Aleta DiRienzo at (715) 732-7780 or visit the Marinette County website at www.marinettecounty.com.



Flies, continued from page 6

✻ *Use Scented Oil* – Try some Garlic, Lavender, Peppermint or Eucalyptus Oil. Dab a bit on an old bandana and tie it around your neck - it will help keep you from being attacked.

In conclusion, we have some creepy critters in our neck of the woods that we *really* love to hate. Just take the necessary precautions and you will be able to do all the fun, outdoorsy, summer and fall activities that you enjoy. If you missed the past articles of this series “Critters We Love to Hate”, visit the *Northwoods Journal* online at www.marinettecounty.com and at the bottom of the home page click on the *Northwoods Journal* banner.

References of interest:

- ✻ www.entm.purdue.edu/publichealth/insects/tabunid.html
- ✻ <http://ohioline.osu.edu/hygfact/2000/2115.html>
- ✻ www.uri.edu/ce/factsheets/sheets/deerhoserflies.html
- ✻ <http://en.wikipedia.org/wiki/Horse-fly>
- ✻ http://en.wikipedia.org/wiki/Deer_fly

Harmony Arboretum Schedule of Events

Located 7 miles west of Marinette, ½ mile south of State Highway 64 on County E. *All programs are free unless otherwise stated.* For more information, call UWEX at 715-732-7510 or LWCD at 715-732-7780.

September 12: Fall Fest & Plant Sale, 9:30 a.m. to 1:00 p.m. Join Northern Lights Master Gardener Members for this fun event. There will be fruit tasting (early apples, plums, pears), crafts to make, and the annual fall plant sale. Details of the craft projects available will be on-line by August 1st. For more information, go to www.uwex.edu/ces/cty/marinette or call toll free 877-884-4408.

November 5: Astronomy at the Arboretum, 6:30-7:30 p.m. Spend an evening under the stars! Learn about the stars, constellations, mythology, and make your own star chart to take home. Dress for the weather. Call 715-732-7784 for more information.

Lake Health, continued from page 7

Using lake classification for AIS work

Lake classification is a flexible lake management tool that Counties use to organize lakes into similar groups and tailor management approaches to meet the needs of lakes within each class. The lake classification process allows Counties to gather data about their lakes’ physical features—such as lake type, size, watershed area, aquatic plant surveys, sensitivity to pollution and other development. Basic data gathering like aquatic plant surveys can be valuable to assess the presence/absence of AIS species, ecological susceptibility of certain lakes to invasion by given AIS species, and vectors for the movement of AIS within and into the county. This could result in classifying county lakes in terms of priority lakes to focus AIS prevention resources and targeting resources aimed at managing established populations of invasives.

If you have any questions or concerns about AIS in your lake, please contact Robert Ruleau at (715)-732-7642 or by email at rruleau@marinettecounty.com.